

WaterLine

A publication about Ontario's water and wastewater industry.

**OCWA
AWARDED**

Best SCADA Application
Award and the
Pinnacle Award

2008 Wonderware
Open

Data's made.

Advances in technology translate into benefits for facility owners

When you hear the words 'high tech', it's probably safe to say that water and wastewater treatment facilities are not one of the first places you think of. However, continuing advances in technology, particularly in the area of SCADA, are helping to turn water and wastewater plants into veritable high tech hotbeds.

What is SCADA?

SCADA is an acronym for **Supervisory Control and Data Acquisition**. It refers to a system that collects data from a series of sensors throughout a water/wastewater system and sends that information to a central computer where it can be analyzed and managed.

The latest systems can help monitor and manage virtually every process, function and piece of equipment in a facility – in almost real time. The high degree of transparency and control afforded by today's SCADA systems can help to contain maintenance costs, increase plant efficiency – even enhance worker health and safety.

The earliest of these products were monolithic in nature, meaning they were independent systems with no connections to other systems. Today's more advanced

systems use open architecture and are fully networked, so they're more flexible, convenient and cost-effective than ever before.

The vital role of these remote monitoring and control systems is currently in the spotlight because of the new Drinking Water Quality Management Standards (DWQMS). Those guidelines require municipalities to provide detailed information on both their financial plans and the maintenance of their facilities. SCADA is an invaluable tool on both fronts. Municipalities that can't provide this information risk losing access to future grant money for new facilities or upgrades as their communities grow.

"Today's SCADA systems are truly indispensable tools in the operation of water facilities," says George Terry, VP Operations, Northern Ontario and First Nations for OCWA. "There are a number of significant benefits. It can help you control the costs associated with staffing, chemicals and energy for your facility. It can actually show you the cost per cubic meter to treat wastewater or to distribute drinking water. And it can assist with your financial plan, which is a requirement under DWQMS."



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The potential cost savings don't stop there. Many facility owners have been able to successfully reduce operating costs and improve overall plant efficiency by implementing a SCADA system, which allows them to measure and manage virtually every function and process. And because it ensures critical plant data is

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**Ontario Clean Water Agency
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Complete Solutions. Clear Value



A message from Dante Pontone,
President and CEO of OCWA

The water and
wastewater industry
has been at the
leading edge of this
trend for a number
of years.

OCWA
receives **TWO**
international
AWARDS

OCWA
was recently
honoured with

two awards recognizing the quality and innovation of its remote monitoring system, called Outpost 5. Amid a competitive field spanning numerous industries, the Agency won the 'Best SCADA Application' award and the 'Pinnacle' award (voted on by peers) at the 'Wonderware Open 2008' conference in Las Vegas, Nevada. The awards recognize OCWA's use of advanced technology to provide a comprehensive range of reliable, cost-effective and environmentally-responsible water and wastewater services to municipalities, private sector companies and First Nations.

Working smarter in challenging economic times

As each of our organizations embarks upon this New Year, we do so in the midst of the most challenging economic environment in memory. Across all sectors, industries and levels of government, the continuing financial turmoil is leading organizations to re-think the way they work. The trend is toward working smarter, more efficiently and in the most cost-effective manner possible.

The water and wastewater industry has been at the leading edge of this trend for a number of years, increasingly employing advanced technology to aid in the efficient monitoring and operation of facilities.

In this issue, we explore the increasingly important role technology is playing in delivering safe, reliable and cost-effective water and wastewater services. For example, by monitoring thousands of data points in a given facility, today's powerful SCADA (Supervisory Control and Data Acquisition) systems can help contain maintenance costs, increase plant efficiency and improve worker health and safety.

These tough economic times are also placing an even greater emphasis on the role of asset management in prolonging the life of facilities and equipment (thereby delaying or avoiding costly capital expenses). Technology is helping to make the process of asset management more proactive than ever before – an approach that helps reduce maintenance costs and extend the lifespan of our clients' facilities and equipment. With such an appealing return on investment, many municipalities are taking a closer look at how these powerful software applications might benefit their utilities.

These are just a few of the initiatives we're employing to make the process of operating our client's water and wastewater facilities more efficient. You'll read more about these efforts in the pages that follow. We hope you find it informative.

And behalf of everyone at OCWA, I would like to take this opportunity to wish you and yours all the best for 2009.

SCADA continued from page 1 ...

safely collected and stored in perpetuity, a SCADA system can help minimize the likelihood of fines or penalties that might otherwise result from the accidental loss of such historical data. It's this type of return on investment that's making many municipalities take a closer look at such sophisticated software platforms.

Monitoring and Control Systems in action

Here's an example of how the process of repairing a failed pump can be accomplished more quickly, safely and cost-effectively thanks to today's technology:

The pump failure, recognized by the

system, is brought to the attention of the Operations Manager via a computer screen. The Operator generates a work order that's sent to the handheld device of a professional in the field who is dispatched to repair the unit. The handheld device displays information about the nature of the problem (e.g. mechanical or electrical), and also includes health and safety checklists, the specific equipment and tools the worker will need to complete the job. Once the pump is repaired, that information is fed back into the system, creating an indisputable record of the event that can be accessed for future reference.

Bottled water backlash gains support in Ontario communities

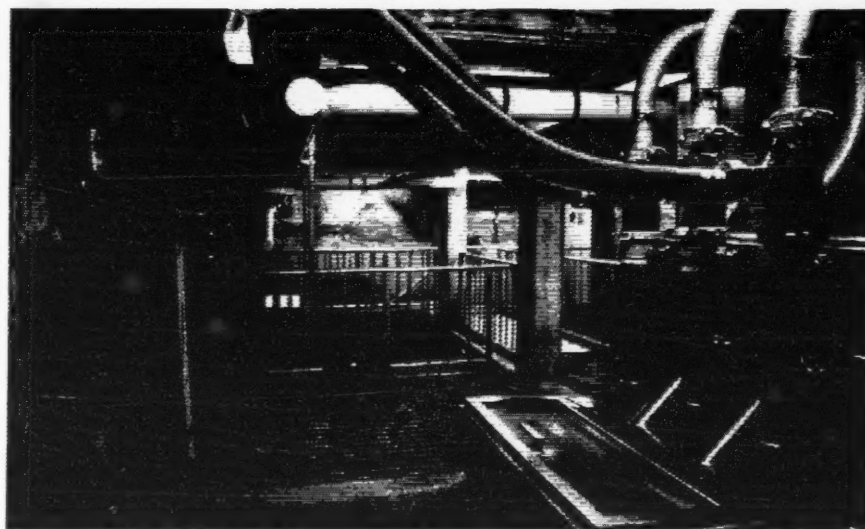
Ontario's environmental commissioner Gord Miller says municipalities are spending millions of dollars to produce the most tested and highest-quality water in the world and they're quite right to promote it. "I'm sure you can't get a Pepsi in the Coca-Cola headquarters – so why should you get bottled water in the headquarters of the municipalities that produce the best drinking water in the world?" Miller told the Kingston *Whig-Standard* recently. So far, 17 municipalities from five provinces have banned bottled water and 45 more are planning restrictions on it.

New Chief Drinking Water Inspector named for Ontario

The Ontario government has appointed John Stager as Assistant Deputy Minister, Drinking Water Management Division and Ontario's Chief Drinking Water Inspector. Stager has served as the Assistant Deputy Minister for the Inspections, Investigations and Enforcement Modernization initiative since 2004. He was also recently recognized with an Amethyst Award for his cross-ministry leadership efforts. Previously, he spent 16 years with the Ministry of the Environment in a series of increasingly challenging roles, including representing the Ontario government in Walkerton during that Town's E. coli crisis in 2000.

Small drinking water systems now regulated by Ministry of Health and Long-Term Care

As of December 1, 2008, small drinking water systems that were previously regulated by the Ministry of the Environment are now regulated by the Ministry of Health and Long-Term Care. Small drinking water systems include restaurants, seasonal trailer parks, campgrounds, community centres, libraries, gas stations, motels, houses of worship, etc. For more information, contact the Ministry's Safe Water Program Coordinator at 416-327-7623.



Sound asset management program vital to extending both facility and equipment life

Given the strategic importance and sheer monetary values associated with water and wastewater facilities, taking good care of them is a no-brainer. Thanks to continuing advances in technology, however, the process of maintaining facilities and equipment has become more proactive and precise than ever before.

If you can adopt a more proactive approach, the maintenance costs will go down accordingly.

With a sound asset management plan in place, municipalities are better-positioned to prolong the life spans of their utilities, make more efficient use of their workforces and get capital plans established well in advance. And under the new Drinking Water Quality Management Standards (DWQMS), access to future government grants could hinge in part on a municipality's ability to demonstrate that its facilities are being operated and maintained in an appropriate manner.

"The big trend now is to integrate the SCADA system with the asset management software," says Bob Simpson, Manager, Asset Management and Operational System Support for OCWA. "This allows you to do real-time, condition-based management of your assets, which has never been possible in the past."

The linkage of the asset management and SCADA systems can help reveal a whole new level of information about the state of the facility and equipment. For example, emerging technology can provide detailed information about factors such as the degree of wear on individual components within a motor. Armed with this data, personnel can intervene before a failure occurs, helping to save costs and minimize downtime.

"If you can adopt a more proactive approach, the maintenance costs will go down accordingly," says Simpson.

Well-designed asset management programs can play a significant role in prolonging facility and equipment life, supporting more informed budget decisions and boosting facility efficiency rates.

15 candles

November 2008 marked
15th anniversary of
OCWA's creation

Since its inception on November 15, 1993, OCWA's employees have helped the Agency earn a reputation as one of the most trusted providers of water and wastewater services in the world.

In addition to providing safe, reliable service to its clients 24 hours a day, seven days a week, the Agency's team of professionals has also repeatedly risen to the challenges associated with high-profile water-related emergencies.

- **The Ice Storm of 1998**

OCWA employees from around the province gathered in eastern Ontario to help the communities impacted by the notorious Ice Storm. In addition to providing uninterrupted service to the affected water and wastewater facilities, the Agency's staff supplied much-needed generators to communities without power.

- **Walkerton E. coli crisis**

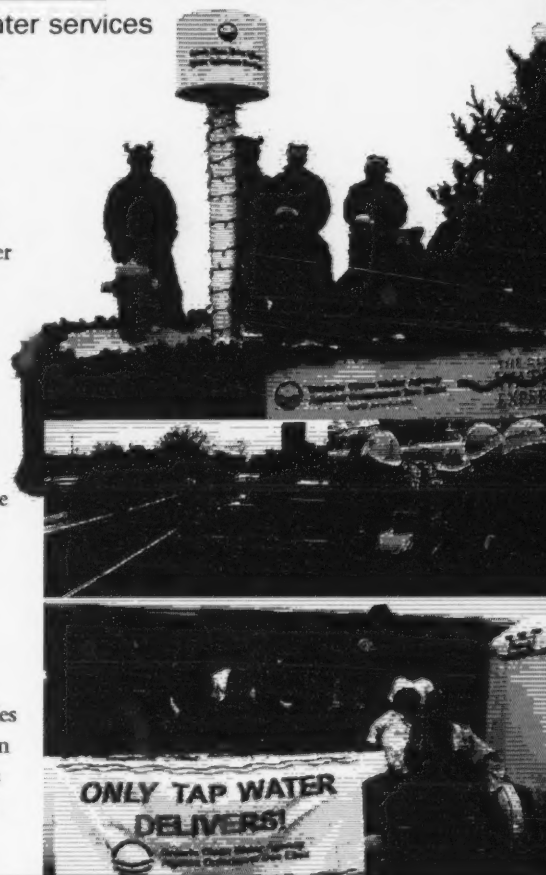
OCWA was called in to conduct an unprecedented restoration of the water distribution system in the Town of Walkerton in the wake of the infamous E. coli crisis.

- **The Blackout of 2003**

The Agency provided millions of Ontario residents and business people with uninterrupted water and wastewater service throughout the massive power outage that affected much of North America in the summer of 2003.

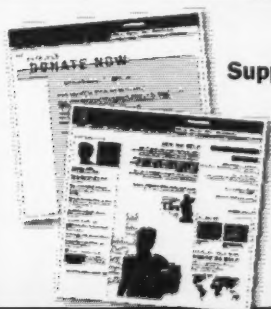
- **Emergency Response Teams**

OCWA's dedicated 'Emergency Response Teams' have stepped in to restore confidence in the water supplies of communities including Pikangikum and Foleyet, Ontario, whose residents were affected by challenges associated with prolonged boil water orders.



Supporting water-related efforts in developing countries

To mark its 15th anniversary, OCWA has made a \$10,000 donation to Water for People (www.waterforpeople.org), a charity dedicated to helping people in developing countries improve their quality of life by supporting the development of locally sustainable drinking water resources. The donation represents \$15 on behalf of each OCWA employee.



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